ABSTRACT

A Destination Call Router network element is provided for Internet Protocol dial-up congestion relief, providing Public Switched Telephone Network off-load. The network element, a combination of an Asynchronous Transfer Mode switch and a Broadband Interworking Call Router with application software, is interposed as a node within the conventionally arranged PSTN. Call data is interworked to destination locations based upon call types associated with called directory numbers. Signaling messages for voice-type calls are forwarded over the standard telephony signaling network to destination End Offices. Signaling for Internet Protocol calls is routed to a Remote Access Server via a Primary Rate Interface after translation to an applicable ISDN protocol, thereby bypassing destination End Offices for IP calls. For both call types, the network element controls its constituent ATM switch to direct ensuing call communications to the appropriate destination. Call Detail Records are collected for IP calls and forwarded to the existing call accounting system of the conventionally arranged PSTN.